

### AMENDMENTS TO THE CLAIMS

1. (currently amended) A virtualizing microarray comprising:

a catalog microarray containing a number of features, each feature containing a type of probe molecule designed to bind a target molecule;

data, physically associated with the catalog microarray, that describing describes each feature of the catalog microarray; and

logic that generates a virtual microarray from the virtualizing microarray, the virtual microarray comprising data describing a subset of the features of the catalog microarray.

2. (original) The virtualizing microarray of claim 1 wherein the data describing a feature of the catalog microarray includes:

data that identifies a position of the feature within the catalog microarray;

data that identifies the type of probe molecules contained in the feature; and

data that describes the target molecule of the probe molecules contained in the feature.

3. (original) The virtualizing microarray of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature includes:

data that describes an immediate target molecule to which the probe molecules bind.

4. (original) The virtualizing microarray of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature includes:

data that describes a biological molecule produced by synthesis directed by an immediate target molecule to which the probe molecules bind.

5. (original) The virtualizing microarray of claim 2 wherein the data that describes the target molecule of the probe molecules contained in the feature further includes:

data describing molecular function;  
data describing a biological process; and  
data describing a cellular component.

6. (original) The virtualizing microarray of claim 1 wherein the logic that generates a virtual microarray from the virtualizing microarray includes:

logic that allows specification of masks related to the data describing each feature of the catalog microarray; and

logic that uses the specified masks to filter the features of the catalog microarray to produce the data describing a subset of the features of the catalog microarray.

7. (original) The virtualizing microarray of claim 1 included in one of:

a microarray scanner;

a microarray-data processing system;

a microarray-data visualization system.

8. Cancel

9. (original) The virtualizing microarray of claim 1 wherein the catalog microarray further includes a header that allows the logic to associate data describing each feature of the catalog microarray with a catalog microarray identified by information contained in the header.